

Salinity influences the disease-induced mortality of the oyster *Crassostrea gigas* and infectivity of the ostreid herpesvirus 1 (OsHV-1)

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Aquaculture Environment Interactions 8: 543–552 (2016)

Table S1: Results of the split-plot ANOVA investigating the effect of salinity (10, 15, 25, 35‰) and time (days 1 to 8 since the start of acclimation) and their interaction on the filtration rate of oysters. Significant p-values ($p < 0.05$) are in bold.

Source of variation	d.f	Sum square	Mean square	F	p
Main plot					
Salinity	3	12.4	4.1	340.0	< 0.001
Error: Tank × Salinity	20	0.2	0.01		
Subplot					
Time	7	4.5	0.6	79.1	< 0.001
Salinity × Time	21	11.5	0.5	67.1	< 0.001
Error: Tank × Salinity × Time	140	1.14	0.01		

Table S2: Results of a one-way ANOVA investigating the effect of salinity (10, 15, 25, 35‰) on the body mass of oysters. Significant p-values ($p < 0.05$) are in bold.

Source of variation	d.f	Sum square	Mean square	F	p
Salinity	3	0.493	0.2	25.45	< 0.001
Error: Tank x Salinity	20	0.129	0.006		

Table S3: Odds of oyster mortality as a function of salinity (10, 15, 25, 35‰), acclimation (acclimated: A, non-acclimated: NA), and time (days 0 to 6 and 7 to 17). Custom hazard ratios were produced with exponentiated contrasts. The table also contains the standard error (SE) of the hazard ratio estimate and the confidence interval (CI) of the hazard ratio, the Wald χ^2 statistic and the resulting p-value. Significant p-values ($p < 0.05$) are in bold.

Contrast Variable	Odds ratio	SE	95 % CI	Khi-2 de Wald	Pr > Khi-2
<i>day 0 - day 6</i>					
10 A vs 15 A	0.036	0.015	0.016 - 0.083	62.3	< 0.001
10 A vs 25 A	0.006	0.003	0.003 - 0.014	142.9	< 0.001
10 A vs 35 A	0.009	0.004	0.004 - 0.023	109.5	< 0.001
15 A vs 25 A	0.171	0.013	0.147 - 0.199	519.7	< 0.001
15 A vs 35 A	0.259	0.041	0.190 - 0.352	74.1	< 0.001
25 A vs 35 A	1.516	0.259	1.084 - 2.119	5.9	0.015
10 NA vs 15 NA	0.693	0.184	0.411 - 1.166	1.9	0.167
10 NA vs 25 NA	0.112	0.023	0.075 - 0.166	117.0	< 0.001
10 NA vs 35 NA	0.123	0.020	0.090 - 0.168	172.0	< 0.001
15 NA vs 25 NA	0.161	0.041	0.099 - 0.249	52.8	< 0.001
15 NA vs 35 NA	0.177	0.039	0.115 - 0.272	62.8	< 0.001
25 NA vs 35 NA	1.098	0.154	0.834 - 1.446	0.4	0.504
10 A vs 10 NA	0.070	0.033	0.027 - 0.179	30.8	< 0.001
15 A vs 15 NA	1.328	0.279	0.880 - 2.003	1.8	0.177
25 A vs 25 NA	1.255	0.127	1.030 - 1.529	5.1	0.024
35 A vs 35 NA	0.909	0.107	0.722 - 1.145	0.7	0.419
<i>day 7 - day 17</i>					
10 A vs 15 A	0.177	0.045	0.108 - 0.290	47.4	< 0.001
10 A vs 25 A	0.138	0.033	0.086 - 0.220	68.2	< 0.001
10 A vs 35 A	0.366	0.121	0.191 - 0.700	9.2	0.002
15 A vs 25 A	0.775	0.069	0.651 - 0.922	8.2	0.004
15 A vs 35 A	2.061	0.502	1.278 - 3.323	8.8	0.003
25 A vs 35 A	2.659	0.619	1.685 - 4.197	17.6	< 0.001
10 NA vs 15 NA	3.185	0.183	2.846 - 3.565	406.0	< 0.001
10 NA vs 25 NA	3.064	0.468	2.271 - 4.132	53.8	< 0.001
10 NA vs 35 NA	3.803	0.902	2.390 - 6.053	31.8	< 0.001
15 NA vs 25 NA	0.962	0.129	0.739 - 1.251	0.1	0.772
15 NA vs 35 NA	1.194	0.273	0.763 - 1.870	0.6	0.438
25 NA vs 35 NA	1.242	0.328	0.739 - 2.085	0.7	0.414
10 A vs 10 NA	0.031	0.007	0.019 - 0.049	214.8	< 0.001
15 A vs 15 NA	0.551	0.039	0.479 - 0.634	69.3	< 0.001
25 A vs 25 NA	0.684	0.083	0.539 - 0.867	9.8	0.002
35 A vs 35 NA	0.319	0.039	0.252 - 0.405	87.9	< 0.001

Table S4: Results of the split-split plot ANOVA investigating the effect of salinity (10, 15, 25, 35‰), exposure to the source of infection (exposed, control) acclimation (acclimated, non-acclimated) and time (days 2 and 4) and their interactions on the level of OsHV-1 DNA in oyster tissues. Data were log (x+1) transformed. Significant p-values (p<0.05) are in bold.

Source of variation	d.f	Sum square	Mean square	F	p
Mainplot					
Salinity	3	108.8	36.3	36.12	< 0.001
Infection	1	222.8	222.8	221.96	< 0.001
Salinity × Infection	3	115.0	38.3	38.19	< 0.001
Error: Tank × Salinity × Infection	16	16.1	1.0		
Subplot					
Acclim	1	0.01	0.01	0.02	0.885
Salinity × Acclim	3	0.8	0.3	0.49	0.693
Infection × Acclim	1	2.7	2.7	5.19	0.037
Salinity × Infection × Acclim	3	17.7	5.9	11.49	< 0.001
Error: Tank × Salinity × Infection × Acclim	16	8.2	0.5		
Sub-subplot					
Time	1	63.0	63.0	50.86	< 0.001
Salinity × Time	3	10.8	3.6	2.90	0.050
Infection × Time	1	9.6	9.6	7.76	0.009
Acclim × Time	1	0.02	0.02	0.02	0.895
Salinity × Infection × Time	3	5.7	1.9	1.53	0.226
Salinity × Acclim × Time	3	3.4	1.1	0.92	0.443
Infection × Acclim × Time	1	0.2	0.2	0.18	0.679
Salinity × Infection × Acclim × Time	3	5.6	1.9	1.51	0.232
Error: Tank × Salinity × Infection × Acclim × Time	32	39.6	1.2		

Table S5: Results of the split-plot ANOVA investigating the effect of salinity, exposure to the source of infection, acclimation and their interactions on the OsHV-1 gene expression in oyster tissues at day 2. Significant p-values ($p < 0.05$) are in bold.

Source of variation	d.f	ORF72		ORF75		ORF87		ORF117	
		F	p	F	p	F	p	F	p
Main plot									
Salinity	3	23.9	< 0.001	43.0	< 0.001	26.6	< 0.001	16.0	< 0.001
Infection	1	257.8	< 0.001	371.1	< 0.001	305.8	< 0.001	212.4	< 0.001
Acclim	1	0.8	0.389	0.7	0.419	1.0	0.333	0.6	0.463
Salinity \times Infection	3	26.3	< 0.001	26.4	< 0.001	28.1	< 0.001	20.6	< 0.001
Error : Tank \times Salinity \times Infection	15								
Subplot									
Acclim	1	0.8	0.376	0.1	0.731	0.1	0.777	0.6	0.441
Salinity \times Acclim	3	0.5	0.688	0.4	0.789	1.0	0.406	0.5	0.71
Infection \times Acclim	1	0.3	0.615	0.6	0.442	0.01	0.91	0.2	0.657
Salinity \times Infection \times Acclim	3	2.4	0.109	0.6	0.639	1.7	0.201	1.2	0.342
Error : Tank \times Salinity \times Infection \times Acclim	15								

Table S6: Results of the split-plot ANOVA investigating the effect of salinity (10, 25‰), time (days 2 and 4) and their interaction on the level of OsHV-1 DNA in oyster tissues. Data were log (x+1) transformed. Significant p-values ($p < 0.05$) are in bold.

Source of variation	d.f	Sum square	Mean square	F	p
Main plot					
Salinity	1	32.4	32.4	26.53	0.007
Error: Tank \times Salinity	4	4.9	1.2		
Subplot					
Time	1	5.1	5.1	11.26	0.028
Salinity \times Time	1	1.1	1.1	2.51	0.188
Error: Tank \times Salinity \times Time	4	1.8	0.5		

Table S7: Results of the ANOVA investigating the effect of salinity (10, 25‰) on the OsHV-1 gene expression in oyster tissues at day 2. Significant p-values ($p < 0.05$) are in bold.

OsHV-1 genes	Source of variation	d.f	Sum square	Mean square	F	p
ORF72	Salinity	1	214.80	214.80	12.67	0.024
	Residuals	4	67.82	16.96		
ORF75	Salinity	1	211.10	211.10	20.95	0.010
	Residuals	4	40.30	10.07		
ORF87	Salinity	1	209.81	209.81	16.4	0.016
	Residuals	4	51.17	12.79		
ORF117	Salinity	1	208.74	208.74	11.5	0.028
	Residuals	4	72.59	18.15		